# μRS Upgrade Update

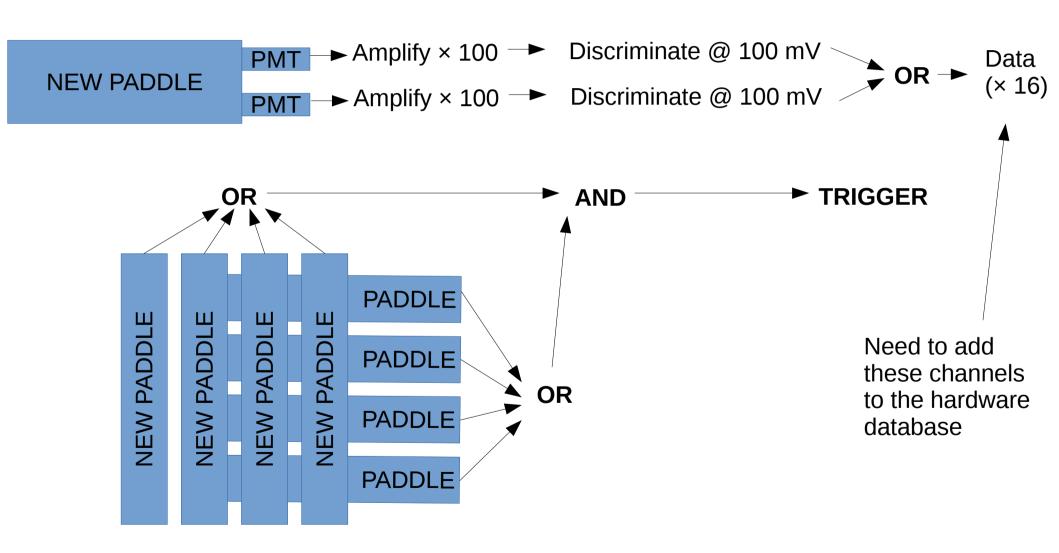
20/05/16 Pip Hamilton

### Status of Paddles

- 15/16 paddles wrapped and ready to go.
  - One paddle still has dodgy bracket.
    - Retrying glue.
    - If glue fails again will ask Todd to drill holes we can set the rods in.
  - Breakages during assembly also necessitate testing
    2 more PMTs for this paddle.
- Carried out all bench tests to determine readout logic.

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### Readout Logic



### **Power Supply**

- The 16 paddles will require 13 power cables at 700 to 1200 V.
- We can accommodate this on the two existing COWs if we move over the three components on COW2 (aerogels + SC2) to COW1 (COW2 operating voltage is currently too high to cover range required for PMTs).
- COW1 will then be operating at the limits of its range but they will juuuuuuust fit.

## Cabling

- After cutting 32 signal cables to the length of the existing  $\mu RS$  PMT cables we hit a snag.
  - No spare BNC connectors at FTBF.
  - Stockroom charges \$15 a connector! (even though online they are ~\$1.50...)
- Fortunately we dug around in MC8 and located some preterminated cables.
  - $\sim 10'$  shorter than the existing cables (54' vs. 64').
  - Will rout logic signals from new paddles through ~10' of additional LEMO cabling ("the Acciaro Solution")
- Found plenty of these 54' cables ⇒ will not require any extra expense for new connectors.

### **Insertion Plan**

- Need to put a spacer in the bottom of the  $\mu$ RS.
  - Keep the brackets from knocking against the side of the uRS (they are fragile!)
  - Just need to scavenge up 4 pieces of plastic tubing.
- Cables are all labelled & ready to lay.
- Old paddles currently removed; will replace one by one to support new (vertical) paddles as they are installed.
- Hope we can finish this today!
  - If not, plans to work over weekend.

## **Animal Fact Friday**

Despite a usual diet of shellfish, walruses can "go rogue" and become predators on other vertebrates (e.g. smaller seals).



Usually this behaviour only manifests when other food is scarce, but there are Eskimo stories of lone male walruses that switch over to a 100% diet of other mammals.